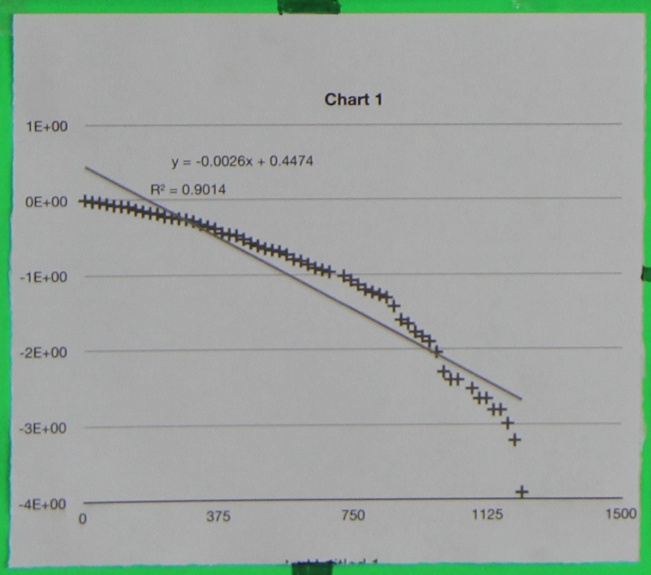
I will be mainly focusing on the standby life of an iPhone with music on and see how long will it last. I took approximately 21hours in order to acquire the data. Sometimes I don't use the phone correctly which leaded to killing the batteries, so by researching its standby time, I could plan what time is suitable for doing different stuffs and could possibly help me on managing the usage of the phone.This research also help me in real life to spend my phone's battery wisely and to extend it longer.

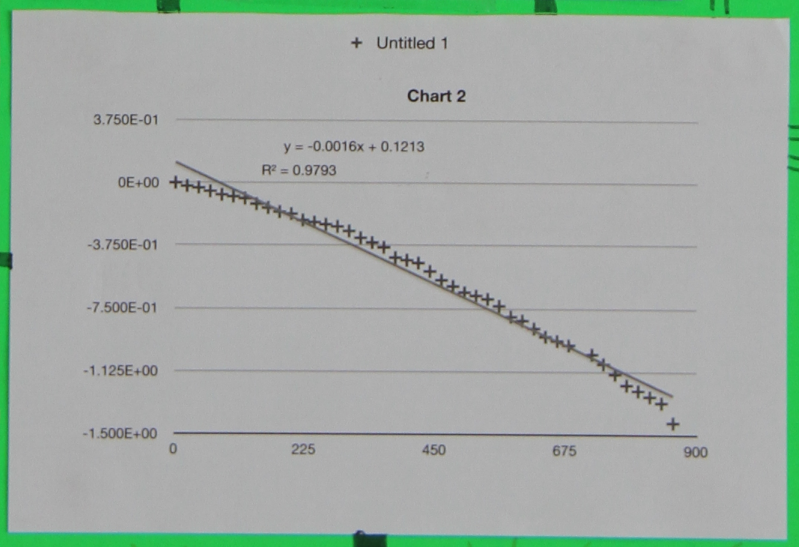
Time	Battery Percentage			
0-20	100%	0	1.000E+00	0.000E+00
20-40	98%	20	9.800E-01	-2.020E-02
40-60	97%	40	9.700E-01	-3.046E-02
60-80	95%	60	9.500E-01	-5.129E-02
80-100	93%	80	9.300E-01	-7.257E-02
100-120	92%	100	9.200E-01	-8.338E-02
120-140	91%	120	9.100E-01	-9.431E-02
140-160	88%	140	8.800E-01	-1.278E-01
160-180	86%	160	8.600E-01	-1.508E-01
180-200	84%	180	8.400E-01	-1.744E-01
200-220	83%	200	8.300E-01	-1.863E-01
220-240	80%	220	8.000E-01	-2.231E-01
240-260	79%	240	7.900E-01	-2.357E-01
260-280	78%	260	7.800E-01	-2.485E-01
280-300	77%	280	7.700E-01	-2.614E-01
300-320	75%	300	7.500E-01	-2.877E-01
320-340	72%	320	7.200E-01	-3.285E-01
340-360	70%	340	7.000E-01	-3.567E-01
360-380	68%	360	6.800E-01	-3.857E-01
380-400	64%	380	6.400E-01	-4.463E-01
400-420	63%	400	6.300E-01	-4.620E-01
420-440	62%	420	6.200E-01	-4.780E-01
440-460	59%	440	5.900E-01	-5.276E-01
460-480	56%	460	5.600E-01	-5.798E-01
480-500	54%	480	5.400E-01	-6.162E-01
500-520	52%	500	5.200E-01	-6.539E-01
520-540	51%	520	5.100E-01	-6.733E-01
540-560	50%	540	5.000E-01	-6.931E-01

Time	Battery Percentage			
560-580	48%	560	4.800E-01	-7.340E-01
580-600	45%	580	4.500E-01	-7.985E-01
600-620	44%	600	4.400E-01	-8.210E-01
620-640	42%	620	4.200E-01	-8.675E-01
640-660	40%	640	4.000E-01	-9.163E-01
660-680	39%	660	3.900E-01	-9.416E-01
680-700	38%	680	3.800E-01	-9.676E-01
720-740	36%	720	3.600E-01	-1.022E+00
740-760	34%	740	3.400E-01	-1.079E+00
760-780	32%	760	3.200E-01	-1.139E+00
780-800	30%	780	3.000E-01	-1.204E+00
800-820	29%	800	2.900E-01	-1.238E+00
820-840	28%	820	2.800E-01	-1.273E+00
840-860	27%	840	2.700E-01	-1.309E+00
860-880	24%	860	2.400E-01	-1.427E+00
880-900	20%	880	2.000E-01	-1.609E+00
900-920	19%	900	1.900E-01	-1.661E+00
920-940	17%	920	1.700E-01	-1.772E+00
940-960	16%	940	1.600E-01	-1.833E+00
960-980	15%	960	1.500E-01	-1.897E+00
980-1000	13%	980	1.300E-01	-2.040E+00
1000-1020	10%	1000	1.000E-01	-2.303E+00
1020-1040	9%	1020	9.000E-02	-2.408E+00
1040-1080	9%	1040	9.000E-02	-2.408E+00
1080-1100	8%	1080	8.000E-02	-2.526E+00
1100-1120	7%	1100	7.000E-02	-2.659E+00
1120-1140	7%	1120	7.000E-02	-2.659E+00
1140-1160	6%	1140	6.000E-02	-2.813E+00

Time	Battery Percentage
1160-1180	6%
1180-1200	5%
1200-1220	4%
1220-1240	2%
1240-1260	0%

1160	6.000E-02	-2.813E+00
1180	5.000E-02	-2.996E+00
1200	4.000E-02	-3.219E+00
1220	2.000E-02	-3.912E+00





During the process of this topic, with the help from my datas that I've collected, I'm was able to generate a general formula for my datas and charts. Since my topic is about decaying of battery, so unfortunately a pattern for this topic was not able to be created but I had still found a general formula for it which is (Y=AE^-KT).
This general formula was made for finding exponential regression questions. With the help of the formula, as I continued the process, I figured it out LOGing this equation will be best for me since I wanted my lines appeared in the chart to be a straight as possible, so from (Y=AE^-KT), I had changed it to (LnY=LnA^-KT) where I which then substituted my formula to Y, my intercept to A and the slope to K.
While using the application Numbers to help me for this process/topic, I could finish this data/graph easily and fast, I only substituted one of the equation to this formula and quickly drag the other down to create other new datas and plotted my chart.
My general formula works with my datas because this equation was meant to be used in situation like my topic, decaying of battery.

The difference between Chart 1 and Chart 2 is that Chart 1 shows the whole thing from my data including mistakes. Also from these 2 charts the number for R^2 also changed, and it proves how much the difference were made. During this process there were times that when I accidentally typed in the wrong information (Time 680-700 to 720-740), which messed my some of the points in the chart, and as we could see, the best fit line I've inserted in Chart 1wasn't as good as Chart 2 since Chart 1 shows the whole process including the drop of battery percentage, and Chart 2 only shows half of the data, but in a good way, showing half of the data could later help me predict the future for this graph which is continuing to drop.

It took my a huge amount of time to collect this data so its reasonable to have such little careless mistakes. During this processing of collecting the data, there were interruptions like phones calls and buzzing from the message I got and it had affected the data I got. The temperature also has an affect on the data I collected because If the phone is in a hotter temperature room, then the battery drains faster, and when its cold its drains less faster. Unfortunately, it was hot when I collected this data so as we see in the graph, at around 10% of the battery, it did not last as long as was supposed to be.

ny phone wiser.

REFLECTION